

1-Day Program
2 Tracks
Earn Up to 6 PDH Credits

Track 1

Puget Sound Recovery

- *Watershed Management*
- *Sea Level Rise*
- *Carbon Sequestration*
- *Engineering with Nature*

Track 2

Built Environment

- *Watershed Management*
- *Fish Passage*
- *Combined Sewer Overflow*
- *Climate Resiliency*



SAME Seattle Post's forum focused on regional, current, and evolving issues

2019 SUSTAINABILITY TRAINING FORUM

PUGET SOUND RECOVERY & THE BUILT ENVIRONMENT

Infrastructure for Puget Sound Recovery

THURSDAY, MARCH 28, 2019

8:00 am to 5:00 pm

University of Washington
Husky Union Building (HUB)

PARTICIPATING ORGANIZATIONS



COST / REGISTRATION

Register online at: <https://www.eventbrite.com/e/2019-sustainability-training-forum-tickets-55007286274>

Cost	
\$195	SAME Members
\$225	Non-Members
\$45	Active Military/Civil Service/Students

PLENARY SESSION

Time: 8:45 – 9:20 am

Location: Lyceum

OPENING SPEAKERS

Julie Erickson, PMP — SAME Seattle Post President - President & CEO, Stell Environmental

LTC (ret) Wendell 'Buddy' Barnes, PE, F.SAME, USA — SAME National President Elect & Chair, Academy of Fellows — ARCADIS

Brenda Bachman — Unit Manager, Risk Evaluation — US EPA Region 10

KEYNOTE SPEAKER

DR. TODD BRIDGES

USACE National Lead for Engineering With Nature® (EWN) Initiative

Synopsis: EWN is the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental, and social benefits through collaboration. Current sea level rise predictions and recent storm events worldwide highlight the need for assuring natural processes are considered as a part of built infrastructure systems that deliver multiple benefits. An EWN approach can be used to support decision making and multiple use output for flood risk management, navigation infrastructure, ecosystem restoration, shoreline management, and linkages among these. Dr. Todd Bridges will describe the key elements involved in developing EWN projects, status of its current use, and provide a few demonstration projects that advance sustainable infrastructure development from around the world.

LUNCHEON SPEAKER

STEPHANIE SOLIEN

Vice Chair Puget Sound Partnership

Co Chair Southern Resident Orca Task Force

Time: 1:00 – 1:45 pm

Location: Lyceum

Synopsis: In spring of 2018, Governor Inslee officially launched the Southern Resident Orca Task Force, a two-year initiative to recover the threatened and endangered southern resident orcas. Task Force Co Chair Stephanie Solien will present the Southern Resident Orca Task Force's year one recommendations, an ambitious, science-based package that the Task Force believes if implemented will make significant progress in recovering our beloved southern resident orcas. Stephanie Solien will also highlight some specific Task Force recommendations that would benefit from sustainable infrastructure and EWN approaches, and encourage more collaboration between the military and civil engineering communities and the science-based recovery efforts to protect our local orcas and the Salish Sea ecosystem that they depend on.

PROGRAM SCHEDULE

March 28	Room 250	Room 145	LYCEUM
8:00 am			Registration/ Breakfast Station
8:45 am			Plenary Session
9:30 am	Puget Sound Recovery Track	Built Environment Track	Beverage Station
	Session 1 Watershed management planning & approach	Session 1 Watershed management & water resources management implementation	
11:00 am	Session 2 Sea level rise & climate change impacts on coastal habitats	Session 2 Fish passage & barriers, local & government highway systems	
12:30 pm			Lunch & Guest Speaker
2:00 pm	Session 3 Blue carbon & aquatic carbon sequestration impacts on Puget Sound recovery	Session 3 CSO reduction & green infrastructure impact on Puget Sound recovery	Beverage Station
3:30 pm	Session 4 Engineering With Nature (EWN)	Session 4 Climate resilient approaches for infrastructure related to vertical structure growth	
5:00 pm	Program Adjourns		

Morning Training Sessions & Forum: PUGET SOUND RECOVERY TRACK

Session 1 - Watershed management planning & approach

Time: 9:30 – 10:50 am **Location:** Room 250 **Moderator:** Brenda Bachman — Unit Manager, Risk Evaluation — US EPA Region 10

Speakers:	Jason Mulvihill-Kuntz	Salmon Recovery Manager — Lake Washington/Cedar/Sammamish Watershed Salmon Recovery Council
	Stephen Stanley	Senior Aquatic Ecologist for Puget Sound Watershed Characterization Project — Department of Ecology
	Frank Leonetti	Project Specialist IV, Surface Water Management — Snohomish County Public Works
Synopsis:	The 2019 ASCE report card for Washington's infrastructure resulted in a D+ grade for infrastructure to manage stormwater. Non-point source pollution from stormwater flow continues to be the most significant affecting Puget Sound and salmon recovery. This session will address the Washington State Department of Ecology's newly updated watershed assessment tools to characterize watersheds and quantify the effect of existing and future land cover change on the hydrology of streams and rivers. These tools also identify the relative level of vulnerability of a watershed unit to climate change. Local government can use these and other tools for planning and prioritizing activities for watershed management. Additionally, the effects of watershed management activities on Benthic Index of Biotic Integrity (B-IBI) scores will be discussed.	

Session 2 - Sea level rise & climate change impacts on coastal habitats

Time: 11:00 – 12:20 pm **Location:** Room 250 **Moderator:** Susie Imholt — Senior Scientist — Normandeau Associates, Inc.

Speakers:	Ian Miller, PhD	Coastal Hazards Specialist — Washington Sea Grant
	Nathan vanArendonk	Graduate Student, Department of Geology — Western Washington University
	Andrea MacLennan	Coastal Geomorphologist — Coastal Geologic Services, Inc.
Synopsis:	Sea level rise is predicted to cause significant change to coastal habitats including the area, location, and rates of change in the structure and function of spawning, rearing, and foraging habitats important to salmon recovery and ecosystem health. Sea level rise is projected to directly flood coastal environments as well as promote additional storm and wave energy to reach the shore relative to today. We explore tools for sea level rise projections and vulnerability assessments of wetlands/marshes, beaches, and bluffed shorelines to inform planning and decision-making processes.	

Afternoon Training Sessions & Forum: PUGET SOUND RECOVERY TRACK

Session 3 - Blue carbon & aquatic carbon sequestration impacts

Time: 2:00 – 3:20 pm **Location:** Room 250 **Moderator:** Susie Imholt — Senior Scientist — Normandeau Associates, Inc.

Speakers:	Amy Borde	Senior Research Scientist Coastal Ecosystem Research — Marine Sciences Laboratory; Pacific Northwest National Lab (PNNL)
	Micah Horwith, PhD	Coastal Scientist — WA Department of Natural Resources (DNR)
	Jon Sloan	Senior Environmental Program Manager — Port of Seattle
Synopsis:	This session provides background on blue carbon in coastal ecosystems and the potential to mitigate negative impacts of carbon emissions. We will explore assessments of regional blue carbon stocks to determine the capacity of certain ecosystems to sequester carbon. We will discuss a case study at Smith Cove: experiments with salt marsh vegetation, eelgrass meadows, and kelp beds which function to sequester aquatic carbon and create fish habitat.	

Session 4 - Engineering With Nature (EWN)

Time: 3:30 – 4:50 pm **Location:** Room 250 **Moderator:** Todd Bridges, PhD — National Lead for Engineering With Nature Initiative; Senior Research Scientist for Environmental Science — USACE, ERDC

Speakers:	Mark Eberlein	Regional Environmental Officer FEMA, Region 10 — FEMA
	Jim Johannessen	Principal, Coastal Geologist — Coastal Geologic Services, Inc.
	John Readshaw, PE	Manager, Coastal Engineering & Dredging, Ports & Marine Group — SNC-Lavalin, Inc.
	Sam Whitin	New England Operations Manager — EA Engineering, Science & Technology, Inc.
Synopsis:	This session will discuss in more detail the broad range of applications and value that can be provided by using the EWN approach specific to the Puget Sound region. In particular, we will explore the current and future use of structural and non-structural measures needed to support recovery of the Puget Sound ecosystem while economic development continues.	

Morning Training Sessions & Forum: **BUILT ENVIRONMENT TRACK**

Session 1 - Watershed management & water resources management implementation

Time: 9:30 – 10:50 am **Location:** Room 145 **Moderator:** Bob Galteland, PE, LEED AP — President — Reid Middleton, Inc.

Speakers:	Scott McKinney	Floodplains by Design Grant Program Lead — WA State Department of Ecology
	Bennett Weinstein	Streamflow Section Manager, Water Resources Program — WA State Department of Ecology
Synopsis:	Learn why flood plains matter and the latest advances and regulations in streamflow restoration. Panelists will discuss Floodplains by Design, a collaborative partnership led by The Nature Conservancy, Department of Ecology, and Puget Sound Partnership to fund and support flood risk reduction and habitat restoration, while maximizing benefits from rivers in a cost effective manner. We will also explore the implementation of the 2018 Streamflow Restoration Act, a new law affecting water resource management in Washington State. We'll learn about the planning underway in 15 WRIAs statewide, as well as the new competitive grants available from the Department of Ecology.	

Session 2 - Fish passage & barriers, local & government highway systems

Time: 11:00 – 12:20 pm **Location:** Room 145 **Moderator:** Bill Mavros — Senior Biologist — 48 North Solutions

Speakers:	Don Ponder, PE	Environmental Engineering Section Manager — WA Department of Fish and Wildlife
	Evan Lewis	Special Projects Manager – Fish Passage Water & Land Resources Division — King County
	Kim Mueller	Fish Passage Delivery Program Manager — WA State Department of Transportation
	Jane Atha, PhD	Fluvial Geomorphologist, Science Division, Habitat Program — WA Department of Fish & Wildlife
Synopsis:	Chinook salmon are a vital ecological and cultural importance to the Pacific Northwest. Fish passage is an important component to salmon recovery. This session will explore topics related to fish passage and barriers in the state, including perspectives from a variety of agencies on barrier assessment and prioritization, Fish Barrier Removal Board, and habitat restoration relevant to planners, biologists, and environmental engineers. Speakers will focus on current status and future efforts in fish barrier removal programs.	

Afternoon Training Sessions & Forum: **BUILT ENVIRONMENT TRACK**

Session 3 - Combined sewer overflow (CSO) reduction & green infrastructure impact on Puget Sound recovery

Time: 2:00 – 3:20 pm **Location:** Room 145 **Moderator:** John Phillips — Director of Integrated Watershed Management — Parametrix

Speakers:	Cari Simson	Principal Consultant — Urban Systems Design
	Eric Bergstrom	Senior Project Manager — HDR
Synopsis:	King County faced a challenge of controlling a combined sewer overflow (CSO) in West Seattle, one of the early projects under the federal consent decree. The CSO occurred near the Fauntleroy Ferry Terminal and was adjacent to Fauntleroy Creek and Fauntleroy Cove and surrounded by public beaches. Several CSO control approaches were used including public-private partnerships to reduce runoff from large private properties. King County and the City of Seattle also worked together to launch the RainWise stormwater incentive program for single family residences and constructed fifteen blocks of green infrastructure to manage runoff from the streets. Under Washington State standards, CSO control is a challenge, especially in urban areas with limited space. For this project, King County decided to approach control with a combination of grey and green infrastructure. This session will go through the different approaches used to gain public support and control the CSO and the different types of projects to control CSOs in an urban setting.	

Session 4 - Climate resilient approaches for infrastructure related to vertical structure growth

Time: 3:30 – 4:50 pm **Location:** Room 145 **Moderator:** Bob Galteland, PE, DBIA, LEED AP — President, Reid Middleton, Inc.

Speakers:	Andy Haub, PE	Water Resources Director — City of Olympia
	Shaun O'Neil	GIS Specialist — King County
Synopsis:	Building resilience by investing in physical adaptation efforts and/or utilizing nature-based solutions can provide co-benefits for a range of challenges, including climate mitigation. This session will discuss King County and the City of Olympia efforts to develop climate resilient approaches for infrastructure. The City of Olympia, LOTT Clean Water Alliance, the Port of Olympia, and the consulting firm AECOM Technical Services, Inc. are working together to develop a comprehensive Sea Level Response Plan for the City of Olympia. We will explore the framework of this plan, sea level rise vulnerabilities and risks, and how the City of Olympia intends to implement its Sea Level Response Plan. Additionally we will explore King County adaptation plans for the built environment such as building infrastructure and roads for sea level rise.	

ACKNOWLEDGMENTS

Sustainability Subcommittee Members

Wendy LS Oresik, PE (Chair)	Federal Programs and Western Regional Director	Normandeau Associates, Inc.
Brenda Bachman	Unit Manager, Risk Evaluation, Office of Environmental Review and Assessment	US EPA Region 10
Eset Alemu, PE	Senior Civil Engineer, Ship Canal Water Quality Project, Project Delivery & Engineering Branch	Seattle Public Utilities
John Phillips	Director of Integrated Watershed Management	Parametrix
Paul McCullough	Principal Environmental Engineer	ARCADIS US, Inc.
Kimberly (Kim) Paulson, PE, LEED BD+C, GGP	Mechanical Engineering Branch Manager, Mechanical Engineering Technical Discipline Coordinator, Sustainability Leader	NAVFAC NW
Julia Vidonish, PhD	Environmental Engineer	ARCADIS US, Inc.
Susie Imholt	Senior Scientist	Normandeau Associates, Inc.
Bob Galteland PE, DBIA, LEED AP	President	Reid Middleton, Inc.

SPONSOR

University of Washington Department of Military Science

LTC Scott Miller, Professor of Military Science & Engineer — US Army Corps of Engineers



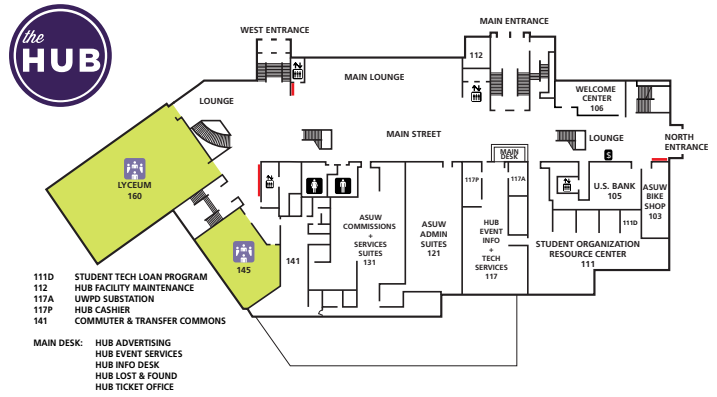
HUSKY UNION BUILDING (HUB)

The HUB is located on upper campus at

**4001 E Stevens Way NE
Seattle, WA 98195.**

Allen Library is to the west, the Communications Building is to the north, and Stevens Way NE runs along the east side of the HUB. Hall Health and the UW Club are located across Stevens Way to the east.

The UW HUB has multiple hydration stations that dispense filtered water to fill up your personal water container. Please help us reduce the waste stream by bringing your own water vessel.



DIRECTIONS

FROM I-5 NORTH

Head southeast on I-5 S
Take exit 169 toward NE 45th
Turn left onto NE 45th St
Turn right onto Memorial Way NE
Turn left onto NE Stevens Way

Destination will be on the right

FROM I-5 SOUTH

Head northeast on I-5 N
Take exit 169 for NE 45th St.
Slight left onto 7th Ave NE
Turn right onto NE 45th St
Turn right onto Memorial Way NE
Turn left onto NE Stevens Way

Destination will be on the right

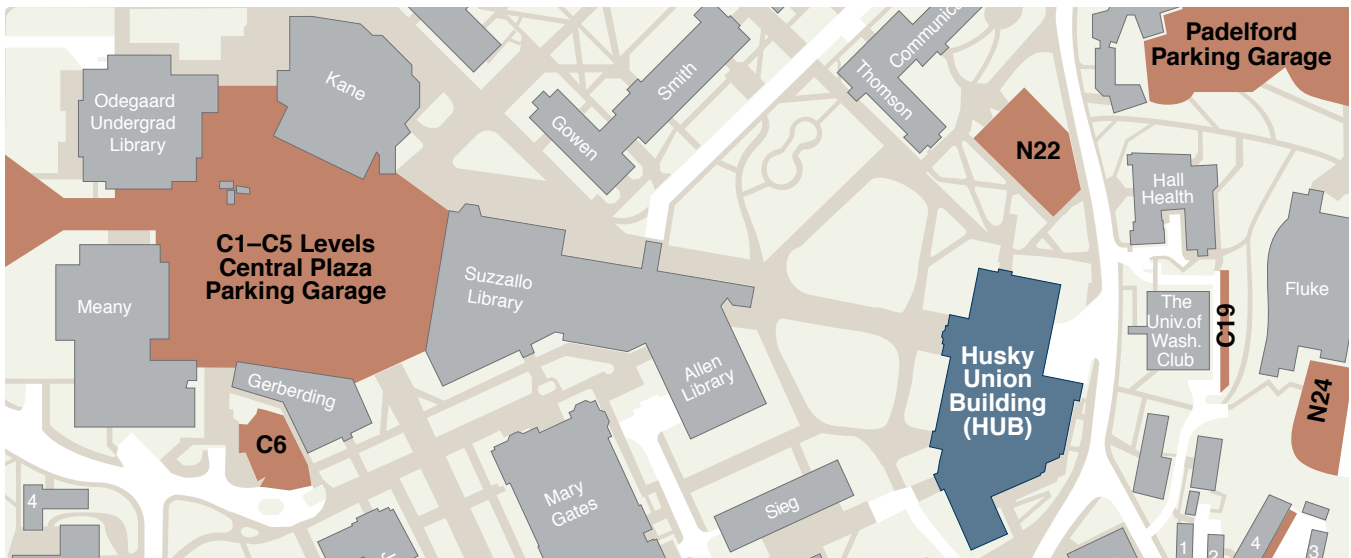
FROM 520 BRIDGE

Turn left to merge onto WA-520 W
Take the Montlake Blvd exit
Merge onto Montlake Blvd E
Slight left onto 25th Ave NE
Turn left onto Pend Oreille Road NE
Turn left onto NE Stevens Way

Destination will be on the right

PARKING

Padelford Parking Garage is the nearest parking lot to the HUB. Disability parking is available in N-22, the parking lot near the HUB's north entrance. Visitors must make parking arrangements at any one of the gatehouses upon entering campus. Parking is not allowed on the brick pavers or pathways that surround the HUB along the north, south or west sides.



Please consider carpooling or using mass transit for a greener environment.

Sound Transit Light Rail Link disembarks one block south of Husky Stadium. The HUB is approximately 1/2 mile uphill of the stadium. The Link Light Rail runs every 6 minutes. Allow for sufficient time to walk or connect via bus. Depart Mountlake Lightrail Station, proceed NE towards campus. You can catch any bus headed northbound on Stevens Way (right side of the road). Drop off is at the HUB bus stop.

An aerial photograph of Seattle, Washington, featuring a dense urban landscape, green spaces, and the city skyline in the distance under a cloudy sky. The entire image is overlaid with a semi-transparent blue filter.

Society of American Military Engineers Seattle Post

Sustainability Training Forum for Puget Sound Recovery and the Built Environment

www.same.org/Seattle

For questions about the post please contact:

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